DISCIPLINE: Systems Management (Problem/Change/Configuration)

Discipline Roadmap for: Systems Management Support Tools

Current

Baseline Environment

Endevor/Change Mgr for DB2
SMP/E
CDB/Auto Utilities
Blue Ocean Track-it (4.0)
Cisco Works
Dell Open Manager
FrontPage Server Monitoring
HP Navigator
HP Openview
HP Top Tools
HP WebJet Admin
HP Network Node Manager
Microsoft Operations Manager (MOM)
MS SMS
Nortel Optivity
Nortel Systems Tools
Novell Zenworks
Nortel Device Manager 3.0.4.1
ELM Performance Manager 3.0
DS Expert 3.40

Bindview RMS 7.2
DS Analyzer 2.02
SourceSafe
Whats Up Gold (7.4)
Panvalet
CDB Utilities
SHAVLIK
DameWare
HP/ILO
HEAT

Deleted (not Problem/Change/Configuration Management Tools):
Pandalay – No such tool exists.
IBM Tivoli Storage Manager is a file backup tool.
Access Data Base – Is a database not a problem/change tool.
EDOR – Spanish translation tool
Executive Diskkeeper – Disk fragmentation tool.
Excel Asset Management – Spreadsheet.
WatchGuard – Firewall product.
Net Manager – Web tool.
NETBOTZ – Network Monitor.
SNMP Utilities - underlying protocol

Please see next slide for Discipline details

DISCIPLINE: Problem/Change/Configuration Management

DOMAIN: SYSTEM MANAGEMENT SERVICES

Current	2 Years	5 Years
Baseline Environment	**Tactical Deployment**	**Strategic Direction**

Baseline on previous slide

Tactical Deployment:
MS MOM
MS SMS
What's Up Gold
Shavlik
HP Openview
Novell Zenwork
BMC Remedy
FrontRange HEAT
Peregrine

Strategic Direction:
Market watch of

tactical deployment products, plus

integrated management suites

Shared	Agency
☑	☑

Retirement Targets

Tiger (home written) – no support

Mainstream Platforms (must be supported)

Supported OSs: Windows, AIX, Novell, Z/OS, UNIX

Containment Targets

DCL, LLR, and Liberium because they are not supported; products designed for DEC, Windows 2000 platforms.

Emerging Platforms

LINUX & Windows

Implications and Dependencies

Management tools must adhere to the hardware and product versions of the AOC standards.

Roadmap Notes

Standards must support the AOC recommendations for operating systems.

DISCIPLINE: Problem/Change/Configuration Management

- **Discipline Boundaries**:

PROBLEM MGMT: The detection of underlying root causes of incidents, their resolution and prevention[2].

Features: incident logging, automatic trouble-ticketing, escalation by severity/time-of-day-and-week/chain-of-command, alarms, notifications, workflow technologies (for problem resolution), update/document by all in chain of responsibility, reporting, audit tracking, knowledge database, repeat-problem identification/analysis, user-customizable filters and correlation rules.[1,3]

Enhanced features: Interfaces to CTI (Computer-Telephony Integration), ACD (Automatic Call Distribution), and IVR (Interactive Voice Response); embedded keyword searches or integration with third party knowledge engines; multi-channel interaction (phone, e-mail, self-service, Web chat, fax, pager, etc.); self-service portals for user online access for problem resolution, password resets, service request options.

CHANGE MGMT: The process that enables an enterprise to control modifications to any part of its IT and communications environment, and supports the acceptance, approval and implementation of the modifications[7].

Features: version management, build support, detailed work-orders, history tracking, audit tracking, impact/gap/risk analysis, graphics, dynamic resource scheduling, install/move/add/change (IMAC) automation, integration with problem and configuration management, knowledge databases [2,3]

CONFIGURATION MGMT: The identification and maintenance of IT assets, and the relationships and dependencies among them[2,5]. Includes imaging, data & personality capture, software distribution, and application re-packaging products.

Features: software/hard- ware/application/facility (SHAF) discovery, SHAF modeling, inventory tracking, change analysis and planning, install/move/add/ change (IMAC) automation, data for contract management, configuration databases, IT service dependency mapping [3,4,6]

- **Recommendations**: These processes are inter-linked and inter-dependent; end-to-end service comprises 6 process domains[12]:
    - (1) INCIDENT – error, difficulty, service request, new requirement
    - (2) PROBLEM = root cause
    - (3) CHANGE – problem resolution, product upgrades, new implementations
    - (4) CONFIGURATION – adaptive, fundamental to tracking items 1 to 3
    - (5) SELF-SERVICE – to request changes online, and to select patches to implement
    - (6) SLA REPORTING – monitors customer service levels and total process effectiveness

It is best to select a tool suite based on the strengths of the modules for each of the 6 processes above than to select software for the different modules and try to knit them together.[12] "Plan for increased overlapping among these tool categories. Treat investments as tactical until the nature of successful integration and product evolution becomes clear.[3]" "Companies should move from siloed management to an integrated system, which will require redefining roles, responsibilities and linkages between the business, application development and IT operations.[2]"

SECURITY: The selection of a tool should be assessed against the enterprise's policies for security to ensure compliance.[4]

DISCIPLINE: Problem/Change/Configuration Management

- **Discipline Standards**: Must be vendor supported, documented, supported for current AOC approved platforms/products.
- **Migration Considerations**: The success of a Problem/Change/Configuration Management tool depends on the enterprise's preparation and implementation of the processes the tool supports. Successful implementation requires[3,4,5,6]:

  1st = ESTABLISH POLICY – Written policies that communicate how much diversity will be acceptable and supported. Define the rules and communicate them to the user community. Begin managing the diversity by establishing what users can and can't do and how IT will maintain configuration consistency and availability.

  2nd = DEVELOP and DOCUMENT PROCESS and WORKFLOW: Define and document processes for each task in the life cycle of the resource (desktop, server, network component, etc.) from initial deployment to disposal. This is critical to ensure appropriate handoffs from each phase to the next. (ITIL provides a process framework, a taxonomy.)

  3rd = DEDICATE RESOURCES: Understand that managing the life cycle of an IT resource requires dedicated resources. Before automation can be sought, resources must be dedicated to all phases of the life cycle.

  4th = AUTOMATE the MATURE PROCESS: Eliminate human error and make repeatable tasks more effective and efficient. Map automation requirements to processes. NOTE: Mature the process before automating it: sometimes unrealistic expectations are made of the product, e.g. believing it will work out of the box to implement a process that does not exist or that it can adhere to policies that were never written.

- **Exception Considerations**: Containment products should not be implemented in shops that do not currently use the product.

- **Miscellaneous Notes**: Gartner recommendations:

  Excellence in IT Service and Support[3], Gartner Symposium IT XPO 2005

  > Create a five-year IT service and support excellence road map, from departmental tactics to a corporate-wide architecture strategy.

  > Build and maintain a set of formal service metrics to demonstrate the impact of improvements to customer service processes.

  > Establish new personnel roles and incentive plans aligned with the new demands of IT service management.

  > Apply analytics throughout the service & support cycle and develop a business management approach to service cost/value analysis.

  > Anticipate a constant grooming of the IT service and support portfolio and integrate a marketing and communications plan.

  > Expect ITIL to provide IT operational guidance; however, strategic IT organization will require adoption of multiple models to create business relevance.

  > Require executive buy-in before attempting to deliver an enterprise-wide IT service and support architecture that will extend beyond departmental silos.

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- **Miscellaneous Notes**: Gartner recommendations: (continued)

Incident, Problem and Event Management: The IT Process War[1], Gartner Symposium IT XPO 2004

> Don't let outdated IT service desk and IT operations ideas or practices get in the way of efficient problem-management process.

> Gain commitment from senior management to establish a governance committee with IT service desk, IT operations, and line-of-business stakeholders.

> Create the right culture of open communications: - Share data and knowledge between IT service desk and IT operations.
>   - Survey and inform end-users, post service levels.

> Advanced problem management requires mature configuration management, with IT service dependencies and relationships.

> Use business impact to guide integration priorities between event management and trouble ticket systems.

> Base staff performance metrics and rewards on achieving end-user service levels.

Problem management process change will almost never adhere to all major assumptions about time, resource utilization and degree of difficulty. Management must be prepared to drive the change through the difficult phases, when organizational resistance impedes progress. Ensure continuous, interactive planning between business and technology organizations. Temporary organizational structures are an essential strategy in building effective processes. Organizations form in response to the work patterns and requirements of IT users. Allowing organizations to take shape requires management discipline in human resources, budgeting and governance, but it also allows managers to optimize the organization in support of the real, evolving and perhaps unperceived patterns of information flow that new technologies and processes create. Don't allow "flood" and "drought" to be an excuse for ignoring the integration between event management and trouble ticket systems.

To improve, the problem management process must be tuned and measured regularly. Without measurements, there is no way to know whether the process is effective. Taking multiple measurements of the process increases the possibility that the right qualities of the process are being assessed, and that all of its shareholders have a voice in its development. No one respects or accepts any service metrics but their own. Management must exercise its charter to eliminate this key discontinuity by establishing end-to-end services with metrics agreed to by business unit customers, then use these as the basis for staff performance reviews and rewards.

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- **Miscellaneous Notes**: Gartner recommendations - continued

  Change Management Battles Complexity: Linking Development and Deployment[2], Gartner Symposium IT XPO 2005

  > Senior management sponsorship and follow-through are essential contributors to success. This requires identifying a dedicated full-time equivalent in the role of neutral guide and arbitrator of the IT organization's change policy.

  > Policies and procedures offer "evergreen" management of process refinement to allow for constant renewal of policies and procedures. The IT organization will require an identified and engaged line-of-business resource as an active participant in IT change management.

  > Change management process coordination will require baseline analysis of the application development and IT operations process expertise. Re-engineering to an integrated IT change management framework will dictate new taxonomy, functional roles and organizational culture.

  > Tool convergence* is unlikely in the near term. IT organizations should plan on a multiple tool environment. Process and IT service management analyses will provide the business case on best integration investments. (* convergence of change management tools for different IT resources.)

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DOMAIN: SYSTEM MANAGEMENT SERVICES